

Evaluating Perioperative Differences in Pain Scores and Morphine Equivalent Doses Following Lumbar Spine Surgery Across Different Age Groups. Stephanie Gregory BS; Tarek R Mansour; William K Miller; Jason L. Schroeder MD Department of Surgery, Division of Neurosurgery The University of Toledo Medical Center

Introduction

Lumbar spine fusion is frequently chosen for the treatment of chronic low back pain and for the treatment of degenerative lumbar spinal stenosis. Outcomes of lumbar spine surgery vary across genders and different age groups. This study compares outcomes of lumbar laminectomy/discectomy versus fusion surgery in older versus younger patients.

Methods

Retrospective chart review of patients having laminectomy/discectomy or laminectomy/fusion of 3 vertebral levels or less between 2014 and 2016 at our institution was completed. Patients with greater than two surgeries at the same levels or with surgery localized to greater than 3 levels were excluded. Pain scores were evaluated and morphine equivalent doses (MED) were determined.

Figure 1



A: Pre-op sagittal T1 MRI showing a bulging disc at the level of L5-S1. B: Post-op X-ray showing lumbar screws in place at L5-S1.

Results

Thirty-one patients who met criteria were evaluated. Older patients (OP) included those born before 1960, six were male and nine were female. Mean age of OP at surgery was 60 years; their average length of stay (LOS) was 3.8 days. Younger patients (YP) included 16 individuals, 5 were male and 11 were female. Mean age of YP at surgery was 31 years, and their average LOS was 4.6 days. Mean pain scores at admission/discharge were 7/5 for OP and their total mean MED consumption was 1198 mg. For YP admission/discharge pain scores were 8/6 and MED consumption was 1499 mg. In the YP group 5 patients (31%) had previous surgery at the same level versus 1 patient (7%) for the OP group.

Conclusions

Overall, lower pain levels were reported in the older group, as reflected by their decreased length of stay and reduced MED. Due to an aging population and overall increase in spinal surgery, further study is required to understand factors influencing perioperative pain, pain treatment, and LOS for these patients.

Table A		
	Before 1960 (OP)	After 1960 (YP)
Number of Patients	15 (6M, 9F)	16 (5M, 11F)
Mean Age	60 yrs.	31 yrs.
LOS	3.8 days	4.6 days
Mean Pain (A/D)	7/5	8/6
MED	1198 mg	1499 mg
Revision surgery	1 patient (7%)	5 patients (31%)

Learning Objectives

1. Evaluate morphine equivalent doses during length of stay for older and younger individuals following lumbar spine surgery.

2. Contrast reported pain levels upon admission and discharge across different age groups.

3. Explore the psychosocial factors related to the differences in outcomes of lumbar spine surgery in different age groups.

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